

I. Amendments to the Claims

This listing of claims replaces without prejudice all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A telecommunications system for establishing a desired communication between two points, comprising:

a plurality of telecommunication links to transport data packets;

a plurality of telecommunication nodes connected by the telecommunication links;

an operating system distributed on the telecommunication nodes and operable to:

(i) identify at least two operating system functions required to effect the desired communication between the first and second points, each operating system function including a defined time limit for execution of the function;

(ii) determine the computational requirements of each identified operating system function;

(iii) determine the unused computational resources of telecommunication nodes;

(iv) distribute the at least two identified operating system functions to respective telecommunication nodes considering the computational requirements of the identified operating system functions and the unused computational resources of the telecommunication nodes to balance computational loads of said telecommunication nodes; and

~~(iii)~~ (v) execute each identified operating system function on its respective telecommunication node such that a corresponding predetermined total execution time limit for executing all identified operating system functions is not exceeded, in order to accomplish the desired communication.

2. (Previously Presented) The telecommunication system as claimed in claim 1, wherein the desired communication uses at least two different protocols and the operating system is further operable to identify an operating system function to convert said desired communication to required protocols and to distribute the identified protocol conversion function to an appropriate

telecommunication node and to execute the identified protocol conversion function.

3. (Original) The telecommunication system as claimed in claim 1 wherein a first one of the at least two operating system functions adds a time stamp to each data packet of the desired communication received from the first point and a second one of the at least two operating system functions examines the time stamp of each data packet of the desired communication received at the second point and arranges the order and timing of those packets according to the time stamps.

4. (Original) The telecommunication system as claimed in claim 3 wherein the time stamps are generated from a global positioning system reference.

5. (Previously Presented) The telecommunication system as claimed in claim 3 wherein the time stamps are generated from a system clock available in one of the telecommunication links.

Claim 6 (Cancelled)

7. (Currently Amended) The telecommunications system as claimed in claim [[6]] 1 wherein the operating system is further operable to monitor, during the desired communication, the use of computational resources at nodes participating in the desired communication and to re-perform step ~~(ii)~~ (iv) if the desired communication does not meet preset quality of service levels due to computational loading at a node.

Claims 8-11 (Cancelled).

12. (Previously Presented) The telecommunication system of claim 7 wherein at least one of the nodes is a gateway between a packet network and the public switched telephone system.

13. (Previously presented) The telecommunication system of claim 1, wherein available operating system functions include at least one of the following:

- (a) encryption services;
- (b) traffic shaping services;
- (c) data compression services; and
- (d) voice data combiner services for teleconferencing.

14. (Previously presented) The telecommunication system of claim 1, wherein overall loads on the telecommunication nodes and telecommunication links are dynamically balanced by the operating system.

Claims 15-27 (Cancelled)